

FUTY 16.538
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In the Drawings:

None

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FOJY 16.538
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This amendment is in response to the Examiner's Office Action dated 2/16/2005. Applicant wishes to note that the primary reference used in the rejections with regard to claims 2-3, 5, and 6 is the patent to Ohyoshi et al. (USP 6,118,759), which is also assigned to Fujitsu Limited. Since both the pending patent application and the primary reference used (Ohyoshi et al.) are commonly assigned and since at the time the claimed invention was made the primary reference (Ohyoshi et al.) and the claimed invention were both subject to an obligation to be assigned to Fujitsu Limited, the Examiner is hereby requested to withdraw the rejections with regard to 2-3, 5, and 6 in compliance with MPEP section 706.02(1)(2). This response should obviate outstanding issues and make the remaining claims allowable. Reconsideration of this application is respectfully requested in view of the remarks that follow.

STATUS OF CLAIMS

Claims 1-6 are pending.

Claims 1 and 4 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Ohyoshi (USP 6,118,759).

Claims 2 and 3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohyoshi in view of Thomas (USP 5,960,215).

Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohyoshi in view of Soumiya (USP 5,936,958).

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Ohyoshi and Soumiya as applied to claim 5 above, and further in view of Hluchyj (USP 5,497,375).

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FUJY 16.538
09/401,934OVERVIEW OF CLAIMED INVENTION

The presently claimed invention provides for an apparatus for interfacing a frame relay network and an ATM (Asynchronous Transfer Mode) network, wherein the apparatus comprises congestion information extracting means, mode setting means, and congestion information writing means. The congestion information extracting means extracts congestion information from the data of a network - i.e., the frame relay network or the ATM network. The mode setting means sets a mode regarding congestion information of an output side in accordance with a combination of said extracted congestion information and a setting condition, wherein the mode setting means selects a mode among a plurality of modes. The congestion information writing means writes the congestion information into data of the other network (i.e., the frame relay network or the ATM network) in accordance with a mode set by said mode setting means.

In one embodiment, the mode setting means selects any one of the following modes: a first mode in which "congestion occurs" is set to at least congestion information of an ATM cell corresponding to a segment frame; a second mode in which "congestion occurs" is set to congestion information of all of ATM cells corresponding to a segment frame; and a third mode in which "congestion occurs" is set only to congestion information of a final ATM cell corresponding to a segment frame.

In another embodiment, the mode setting means selects any one of the following modes: a first mode in which "congestion occurs" is set to at least congestion information of frame relay data when said received ATM cell is a final ATM cell corresponding to a segment frame; and a second mode in which "congestion occurs" is set to congestion information of frame relay data when said received ATM cell is any one of ATM cells corresponding to a segment frame.

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In yet another embodiment, the mode setting means selects any of the following modes: a first mode in which the congestion information transmitted from the backward direction is directly set to congestion information of frame relay data; and a second mode in which congestion information of frame relay data is always set to "no congestion".

In another embodiment, while setting the congestion information along a backward direction defined from the frame relay network to the ATM network, the mode setting means comprises a congestion information value of an ATM cell received along the backward direction; and the mode setting means selects any one of plural modes prepared by combining the state of said congestion transition means with congestion information of frame relay data. In an extended embodiment, the congestion transition means also comprises a timer, wherein the congestion state is forcibly updated when new congestion information is not reached for a predetermined time period.

REJECTIONS UNDER 35 U.S.C. § 102(e)

Claims 1 and 4 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Ohyoshi et al. (USP 6,118,759). To be properly rejected under 35 U.S.C. § 102, each and every element of the claims must be disclosed in a single cited reference. Ohyoshi et al., however, fail to provide, suggest, or render obvious many of the claimed elements.

The Ohyoshi et al. reference, also assigned to Fujitsu Ltd., provides for a network system and a frame relay switch, wherein administrators for frame relay networks can recognize the quality of the ATM network properly and can manage the frame relay networks in accordance

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with the ATM network quality condition. According to Ohyoshi et al., one frame relay network at the frame transmitting side adds the quality information header in which the ATM network quality information is stored to a frame transmitted from the terminal. Then, the frame is received in another frame relay network at the frame transmitted side through a transmitting side IWF, the ATM network and a transmitted side IWF. At that time, the ATM network quality information is stored in the quality information header of the header. When another frame relay network at the transmitted side receives a frame, it reads and stores the ATM network quality information stored in the quality information header. Therefore, according to Ohyoshi et al.'s system, it becomes possible for an administrator of the frame relay network at the transmitted side to recognize the quality of the ATM network properly.

On page 2 of the office action of 02/16/2005, the examiner states that the Ohyoshi et al. reference, in column 1, lines 48-67 and figure 25 (EFCI), teaches the limitation of "a mode setting means". A closer reading of figure 25 and accompanying description in columns 1-2 of the Ohyoshi et al. reference merely suggests that when congestion occurs in the frame relay network 1 or ATM network 3, the Forward Explicit Congestion Notification (FECN) bit of the core header of the frame or the Explicit Forward Congestion Indication (EFCI) bit in the cell header is set to "1" and the congestion is informed to the frame relay network. Hence, applicant contends that Ohyoshi et al. merely teach setting the congestion indication/notification bit to either "1" or "0". In stark contrast, applicant's independent claims 1 and 4 teach at least the limitation of a mode setting means selecting a mode among a plurality of modes (not just setting a bit to "0" or "1"), a teaching that is neither explicit nor implicit in the Ohyoshi et al. reference.

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Additionally, the mere setting of a congestion notification/indication bit to "0" or "1" as per Ohyoshi et al. fails to anticipate or render obvious the limitation of a "first mode" in which the congestion information transmitted from the backward direction is directly set to congestion information of frame relay data and "a second mode" in which congestion information of frame relay data is always set to "no congestion", limitations of independent claim 4.

Hence, applicant contends that the claimed invention allows for a mode to be selected by a mode setting means, wherein written congestion information is different according to the mode selected, thereby allowing congestion information to be communicated with various networks with ease. Therefore, applicant contends that the Ohyoshi et al. reference fails to anticipate the limitations of independent claims 1 and 4 and, therefore, requests the examiner to withdraw the 35 U.S.C. §102 rejection with respect to claims 1 and 4.

Furthermore, as stated in the 'Remarks' section, applicant wishes to emphasize that both the pending patent application and the Ohyoshi et al. (USP 6,118,759) reference are commonly assigned, and at the time the claimed invention was made, the primary reference (Ohyoshi et al.) and the claimed invention were both subject to an obligation to be assigned to Fujitsu. Hence, in compliance with MPEP section 706.02(1)(2), applicant respectfully request the Examiner to avoid using the Tomofuji et al. reference in the future as part of a 35 U.S.C. § 103 rejection with respect to claims 1 and 4.

REJECTIONS UNDER 35 U.S.C. § 103(a)

Claims 2 and 3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohyoshi in view of Thomas (USP 5,960,215). Claim 5 stands rejected under 35 U.S.C. § 103(a)

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as being unpatentable over Ohyoshi in view of Soumiya (USP 5,936,958). Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Ohyoshi and Soumiya as applied to claim 5 above, and further in view of Hluchyj (USP 5,497,375). To be properly rejected under 35 U.S.C. § 103(a), each and every element of the claims must be addressed through known prior art or be recognized as an obvious variation thereof. Applicant contends that the combination of Ohyoshi in view of Thomas references, or the combination of Ohyoshi in view of the Soumiya references, or the combination of Ohyoshi, Soumiya, and Hluchyj references fail to provide many of the limitations of applicant's pending claims.

Applicant wishes to note that the above-presented arguments with respect to the Ohyoshi reference substantially applies to the rejections of claims 2, 3, 5, and 6.

With respect to claims 2-3, applicant agrees with the examiner that the Ohyoshi reference is silent with respect to the limitation of modes 1-3 of claim 2 and modes 1-2 of claim 3. However, applicant respectfully disagrees with the examiner's argument that such limitations are remedied with the Thomas reference. Specifically, the examiner cites column 57, lines 26-28 and figure 25 of the Thomas reference as teaching such limitations. A closer reading of column 57, lines 26-28 reveals that the citations refer to figure 39C of the Thomas reference, wherein the EFCI field 2176 is either a logical OR of all the EFCI bits in the cells which make up a received packet, or the EFCI bit in the last cell received in the packet. The examiner is reminded that claim 2 describes the congestion information "along a forward direction defined from the frame relay network to the ATM network", while the examiner's citations deal with a direction defined from ATM network to frame relay network.

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Additionally, with respect to claim 2, the citations fail to teach a mode setting means selecting any one of the following modes: a first mode in which "congestion occurs" is set to at least congestion information of an ATM cell corresponding to a segment frame; a second mode in which "congestion occurs" is set to congestion information of all of ATM cells corresponding to a segment frame; and a third mode in which "congestion occurs" is set only to congestion information of a final ATM cell corresponding to a segment frame. Also, with respect to claim 3, the citations fail to teach a first mode in which "congestion occurs" is set to at least congestion information of frame relay data when said received ATM cell is a final ATM cell corresponding to a segment frame; and a second mode in which "congestion occurs" is set to congestion information of frame relay data when said received ATM cell is any one of ATM cells corresponding to a segment frame.

With respect to claims 5-6, the examiner relies on Soumiya et al. reference for the limitation of a congestion transition means "for transferring a congestion state in response to a congestion information value of an ATM cell received along the backward direction." However, a closer reading of the recitation merely teaches the "lowering of frame transmission rate" when "congestion has occurred". Conspicuously absent in the citation is any teaching or suggestion of transferring a state in response to a congestion information value, limitations of claims 5 and 6. Hence, applicant contends that the art of record neither anticipates nor renders obvious the limitations of rejected claims 2-3 and 5-6, and therefore respectfully request the examiner to withdraw the rejections with respect to these claims.

Also, as mentioned in the 'Remarks' section, applicant wishes to note that the primary reference used in the rejections with regard to claims 2, 3, 5 and 6 is the patent to Ohyoshi et al.

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(USP 6,118,759), which is also assigned to Fujitsu Limited. Since both the pending patent application and the primary reference used (Ohyoshi et al.) are commonly assigned and since at the time the claimed invention was made the primary reference (Ohyoshi et al.) and the claimed invention were both subject to an obligation to be assigned to Fujitsu Limited, the Examiner is hereby requested to withdraw the rejections with regard to 2, 3, 5 and 6 in compliance with MPEP section 706.02(1)(2).

SUMMARY

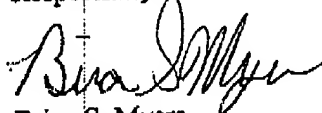
As has been detailed above, none of the references, cited or applied, provide for the specific claimed details of applicant's presently claimed invention, nor renders them obvious. It is believed that this case is in condition for allowance and reconsideration thereof and early issuance is respectfully requested.

As this amendment has been timely filed within the set period of response, no petition for extension of time or associated fee is required. However, the Commissioner is hereby authorized to charge any deficiencies in the fees provided to Deposit Account No. 50-1290.

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If it is felt that an interview would expedite prosecution of this application, please do not
hesitate to contact applicant's representative at the below number.

Respectfully submitted,



Brian S. Myers
Registration No. 46947

Katten Muchin Roseman LLP
575 Madison Ave
New York, NY 10022
(212) 940-8800
May 16, 2005

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